



Dedicated to the Preservation of California Native Flora

The California Native Plant Society

Bristlecone Chapter Newsletter

Volume 35, No. 1
January-February 2014

Bristlecone Chapter

January 2014 President's Message

In the flurry of letters to the editor in support or against locating the LADWP proposed solar ranch site between Mazourka Canyon and Manzanar Reward roads, someone wrote, "it is a vast wasteland not good for anything anyway."

There are markers upon that "wasted" land of people who came before us and found uses for it. Sometime between 1200 and 1466, a Native American from the Haiwee Reservoir area was hunting and lost his arrow. From 1900 to 1906, miners from the Reward Consolidated Mining Company worked veins of ore. They have left rock foundations, piles of tin cans and broken bottles with bottoms an inch thick. From 1892 to 1905, Finley McIver homesteaded the area. His building foundations and dry ditches that had once diverted water from the river to his fields are still there. The old railroad grade of the Slim Princess runs through that land and now a new road has been cut where the digital 395 cable was installed.

Plants have reclaimed the old areas of disturbance. It is a desert scrub community dominated by shad scale and greasewood. Nothing terribly unique about these plants--they are all over the valley floor. Walk around out there on the east side of the river, miles away from the highway, you notice how quiet it is, unless the wind is blowing. You can watch the harriers ride the thermals, hear the ravens talk to each other and contemplate the vastness of things. I am often bothered that we can't find a reason to save a place unless it has something that belongs to the "est" club (i.e. rarest, largest, oldest, smallest). Perhaps what makes that section of the east side of the river special is its commonness. It is marked by those who have come before, but time has erased much of their trace and its emptiness is what makes it special.

In 2011, Inyo County apiary production accounted for \$2,875,500 in revenue. This number isn't just the

amount of honey produced in the county but it also takes into account all those commercial bees from places like Montana that spend the winter here enjoying the nectar of the rabbit brush. I wonder if those visiting bees as well as our native insects find those east-side alluvial fans such a wasteland? What will the long-term consequences be if we take the plants that convert sunlight into food energy and replace them with reflective panels that only convert sunlight into electricity? I don't think any of us know, but it is an important question to ponder.

And while we ponder that question, perhaps we should get to know what is out there better. The January general meeting is when this year's field trips are planned so come and volunteer to lead a trip or offer a suggestion of one you would like to go on and promise yourself to learn a little bit more about the vastness of this place.

--Katie Quinlan

Chapter Election Results

The results of chapter elections held at the November 20, 2013 Meeting are:

- President: Katie Quinlan
- Vice President: Michèle Slaton
- Treasurer: Paul Satterthwaite
- Secretary: Rosemary Jarrett

Thanks to all of you for serving our Bristlecone Chapter.



Pres. Katie Quinlan



Vice Pres Michèle Slaton

**January 22 General Membership Meeting,
“Rare Plants, Weed Wars, and Outdoor
School on the Tribe’s Conservation Land”
Wednesday, 7pm White Mountain
Research Station, 3000 East Line Street,
Bishop**

Staff from the Bishop Tribe's Environmental Management Office will discuss native plants in the Tribe's conservation area. The talk will include their strategies for conserving rare and culturally important plants, information on traditional uses, restoring disturbed areas, and drawing the public into these efforts through community education. Hillary Behr, Katie Larsen, and Brian Adkins, Bishop Paiute Tribe.

**Special Note: Field Trip Planning
Committee**

Meet at 6:00 prior to General Meeting at White Mountain Research Center.
If you are interested in leading botany field trips this year, please attend. Contact Sue Weis, 760-873-3485 for further information.

**Notes from November General Meeting
Program: “What Clouds Tell Us About
Climate Change”**

Our November program speaker was Hal Klieforth, faculty emeritus of the Desert Research Institute and local climatologist, talking about his experiences as a meteorologist in the Eastern Sierra. Hal began his almost accidental career in meteorology in 1951, soon after graduating from the University of California at Los Angeles. At that time, the US Air Force was interested in documenting weather patterns because the number of crashes from mountain weather exceeded those caused by combat. So Hal and other members of his team began exploring the Sierra Wave from gliders.

The Sierra Wave was well-known to pilots in the eastern Sierra. Their work was important to documenting this phenomena and often very exciting on a personal level as they sometimes got caught in turbulent weather patterns at very high altitudes. They found that winds came over the Sierra Mountains from west to east, dipped into the Owens Valley before rising again as they hit the White and

Inyo Mountains. At very high altitudes, the amplitude of these wind currents diminished.

Over time, Hal has observed that the Sierra Wave occurs less frequently and that weather patterns and wind currents seem to be moving from north to south rather than west to east. What this means for weather and precipitation in the Owens Valley is still uncertain but is associated with increased pollution and changes in global weather patterns.

--*Eddie Trimmer*

**Kathy LaShure Wins First Place for
Number of Rare Plant Occurrences in
California Native Plant Society Rare Plant
Hunters Contest 2013**

Our own Kathy LaShure, leader of the Creosote Ring Chapter and hunter of rare plants, was completely surprised with an award from the Rare Plant Treasure Hunt committee for documenting the most species of rare plants in the California Rare Plant Treasure Hunt. She and her team documented 15 occurrences of rare plants in their area winning her first place among botanists participating throughout the state. Her 3-year total is an impressive 72 populations recorded.

The Rare Plant Treasure Hunt is fun if sometimes arduous, but also very important to conservation of rare plant species. Among partners and supporters of the effort are US Bureau of Land Management, US Forest Service, National Forest Foundation, California Department of Fish and Wildlife, California State Parks and National Park Service. The program also receives support from Whale Tail grants, funded by proceeds from special license plates with the California Department of Motor Vehicles. More information is available at <http://cnps.org/cnps/rareplants/treasurehunt/background.php>

Kathy is setting her eyes on some very enigmatic and elusive species for 2014--*Phacelia novemmillensi* or 9-Mile Phacelia. She will have help from Erika Gardener, a Claremont College graduate student. Their field date is sometime between May 7 and 9 along the Pacific Crest Trail south of Walker Pass. Volunteers are welcome. Contact Kathy LaShure for more information at 760-377-4541.

Climate, fire, and water: natural range of variation in eastern California – A presentation at the Mt. Whitney Fish Hatchery, November 2013

Eastern California, the region east of the Sierra Nevada crest from the Lake Tahoe to the Death Valley region is a natural laboratory to study the interactions of climate, fire, and water. At this intersection of the Sierra Nevada, Great Basin, and Mojave Desert, a rich paleo-ecological record of climate and vegetation history is being used by the Inyo National Forest (NF) to understand the Natural Range of Variation (NRV) of ecosystems.

The NRV method compiles information from a reference period – the last 10,000 years, or Holocene Period – to assist in assessing integrity of ecosystem structure, composition, and function. Three Sierra Nevada forests, including the Inyo NF, are currently using NRV analyses in revision of Land and Resource Management Plans.

Warm periods such as we are currently experiencing have occurred during the Holocene. These periods have similarities to current conditions in vegetation, fire regime, and flooding frequency. However, the current warming trend is unique in that it is occurring in the presence of new, widespread drivers and stressors, including non-native species invasions, and human practices such as livestock grazing, recreation, timber harvest, and fire suppression.

Natural disturbances--like fire, wind, and floods--are important to the health of many ecosystems. These disturbances are the main ecosystem functions which land management can affect; appropriate disturbance frequency, intensity, and spatial patterning ensure that ecosystems and their services can be sustained. The restoration of disturbance regimes is emphasized in forest planning, and ranges from re-establishing fire in Jeffrey pine ecosystems, where fire has been excluded, to protecting shrublands from increased fire frequency resulting from invasive annual grasses, to protecting refugial habitats where disturbance historically played a minor role.

--Michèle Slaton

Research in Rock Creek: 2013 field notes

With funding from the Mary DeDecker Botanical Grant I completed a second season of surveying in Rock Creek for my master's thesis, *Vascular Flora of the upper Rock Creek watershed*. The aim of my research is to assemble an updated voucher-based species checklist for the Rock Creek area, to map occurrences of rare, sensitive and exotic plants, and to determine if there is evidence that certain taxa historically documented in the watershed have been affected over the past century by factors such as climate change or human recreational activities.



Draba sierrae

--Photo by Joy England

A primary aim of my work last year was to document areas of the Rock Creek watershed that were little-known botanically. Notably, there were no previous plant samples from the majority of the high mountain peaks. I backpacked into the high country with a small team of assistants and surveyed five alpine peaks along the north-south oriented ridge lines of the watershed: Sherwin Peak and Mount Morgan along the eastern flank, and along the western flank Mount Starr, Pointless Peak (Mono Mesa) and Red Mountain. On these summits we encountered mostly perennial herbaceous species that occur in some of the harshest environmental conditions found in the Sierra Nevada. Species we documented in these

windy, exposed habitats included the rare endemic *Draba sierrae* (Sierra draba), *Polemonium eximium* (sky pilot), *Hulsea algida* (alpine gold), *Podistera nevadensis*. Plant communities on the five peaks were not homogenous; each was distinct for its particular assemblage of species. On the summit of Red Mountain for example, we observed plants growing on striking reddish soils that were not found on the more typical light-colored decomposing granite substrates of Pointless Peak and Mount Starr on the same ridge line just a few miles southward.

Variability in soil chemistry and moisture, microhabitats, topography and geographic situation are likely contributors to some of the differences observed in plant community composition on these peaks.

One of the most exciting botanical 'finds' last year occurred in a popular hiking and fishing area. The rare *Calyptridium pygmaeum* (pygmy pussypaws) had been searched for in Rock Creek, but not found, since a historical collection by Frank Peirson in 1938. The diminutive stature of pygmy pussypaws (smaller than a U.S. dime!) combined with its ephemeral nature make this annual species extremely difficult to see. In late June we located a tiny population of *C. pygmaeum* at Heart Lake, historically the site of Peirson's collection, and additionally made a first-time discovery of pygmy pussypaws at Rock Creek Lakes Resort. This latter discovery is especially noteworthy in that the species was found on a site extremely disturbed by human and vehicular traffic. The Heart Lake population was likewise growing on rather compacted disturbed soils impacted by hiking and fishing.

Non-native plants were also documented. One of the more invasive exotics, cheatgrass (*Bromus tectorum*), I encountered high up the canyon at the entrance to Rock Creek Lake campground. Common dandelion (*Taraxacum officinale*), a *Gaillardia* sp., and several others I recognized in the field as non-native. I am currently in process of assembling an updated, georeferenced species list for Rock Creek. The samples will then be deposited in multiple California herbaria where they will serve as valuable point-in-time references for future studies.

--Joy England

News from the Greenhouse

These cold mornings really zap my motivation to go out and take care of the greenhouse. Reading the paper with another cup of coffee sounds so much nicer than going out and working in below-freezing temperatures. I need to check at least weekly on the rodents and see if they are doing any damage, make sure the wind hasn't blown anything away and once in a while, water.

The plants in the shade house have all been tucked in for the winter. The shade cloth has been rolled up and put away. Jeremiah, the new station manager, has given me a storage locker with a door. I have moved all the pots into it. This helps protect them from the sun and makes them last longer. The locker is also a good place to store all the signs and things we use for the plant sales.

This month I will meet with the Forest Service, Friends of the Inyo and BLM to determine how many and what kind of plants need to be grown for the restoration projects. Then I can determine how much space I have to grow plants for the plant sale. The annual cycle begins again.

--Katie Quinlan

DeDecker Garden Update

On November 2, five Bristlecone chapter members planted 36 new native plants in the DeDecker Garden at the Eastern California Museum in Independence. We installed an assortment of flowering plants, grasses, and shrubs all grown out by Katie Quinlan. We knew where to plant them thanks to the Youth Conservation Corps crew efforts earlier in the year. They had marked locations where there are active drippers so the replacement plants would have water.

The garden looks beautiful, even in the dry autumn season and great news--we now have a gardener! Richard Potashin will be tending the Garden, keeping it pruned and weeded. If you haven't visited this special place or the Eastern California Museum, it is well worth the trip for local history and native botany. Watch for field trip outings that will include a visit to the garden and work days in upcoming newsletters or go it alone.

--Julie Anne Hopkins

Getting Our Youth Out in Nature

*A child said What is the grass? Fetching
it to me with full hands;
How could I answer the child? I do not
know what it is any more than he.*

--Walt Whitman

Is it true that our youth, our children, students and future leaders of the planet, prefer to stay indoors (technology trumps) – that our kids are alienated from Nature? I have read this depressing theory. But recent experience gives me renewed hope.

This past fall I was invited to participate as a docent in the Eastern Sierra Watershed Project (ESWP), an integrative outdoor environmental education program designed and coordinated by Katie Quinlan and Leigh Parmenter. Katie (also our new Bristlecone Chapter President) was the one who hit me up and what a remarkable experience it proved to be. I agreed to be part of an ongoing out-in-nature program with first 4th and then 8th grade students, in our own ecological conundrum--the Lower Owens River.



*Students Sampling Soil
--Photo by Julie Anne Hopkins*

The goal of the ESWP is to take “science in the outdoors to a whole new level—one that gives Owens Valley young people a chance to see the place they live as a science lab and scientists as people they have met working on real world projects that connect to the students’ everyday lives.” The ESWP teaches the students across several disciplines how the earth’s resources and natural systems work and interact with each other and with human-made systems, using well designed and easy to use materials. Following is a list of some skills the students apply:

- Working in teams
- Listening to and accepting diverse opinions
- Solving real-world problems
- Taking the long-term view
- Promoting actions that serve the larger good
- Connecting with the community
- Making a difference in the world

For many of the students, this is their introduction to the Owens pupfish, soil chemistry, river restoration, or how to tell rushes from sedges. Katie and her partner in the project, Lee Parmenter, teach students that “plants are the powerhouse of this planet, without them we would be dead,” and that “the shrubs out here aren’t all sagebrush.” What a fantastic learning opportunity for all – not to mention FUN! The students collect plant, soil and water chemistry data, and help enter the data for analysis that indicates long-term trends of the Lower Owens River Project. They are truly part of a large and meaningful restoration project.

Such an innocent question – what is grass? If we CNPS members, teachers, parents, sisters, aunts and uncles, brothers, sibs—don’t answer, who will help sustain that *sense of wonder* believed to be innate within all children? The Eastern Sierra Watershed Program is one example of helping our youth get out and enjoy nature. Tell us what is going on in your schools and how you are involved. And volunteer as a docent with Katie and Lee!

--Julie Anne Hopkins

Birch Creek Journal

December 6, 2013.—In the middle of a winter night when all the household machinery is silent, I can hear Birch Creek through closed windows as a muted grumble. If instead I hear the quiet ka-thump ka-thump of my heart, I know that the creek has frozen and that it's a very cold night indeed. I wish I could tell you how many times this has happened since we moved here six years ago, but my dedication to data collection falters when it comes to lying awake all night to listen for my heartbeat. My sense, however, is that perfect nighttime silence is less frequent than it used to be just five or six years ago.

Are noisier winter nights evidence of climatic warming? Hard to say. One of the first things you learn in a climatology class is that one swallow does not a summer make, and a handful of observations tells you nothing about long-term trends. Furthermore, once you are convinced that climatic warming is real, any random observation might seem to fit the pattern. Nevertheless, I must say that potential signs of climate change struck me more forcibly this autumn than ever before.

To start, it was the longest and most beautiful autumn I've yet seen in Owens Valley, day after day of brilliant gold trees untouched by wind, and mornings so mild that I hardly needed a sweatshirt on my neighborhood walks. I wasn't complaining—like everyone else I marveled and admired—but it did seem odd. All of nature seemed reluctant to wind down this fall. I saw a dragonfly on November 6, a monarch butterfly on November 15, and a painted lady butterfly on November 30. As usual, I took down the hummingbird feeders in late October before the first cold snap—I have enough on my mind without worrying about frozen hummingbirds—but the red flowers of a cultivated penstemon continued to attract the occasional bird as late as November 10. The plant itself stayed in bloom until just a few days ago. And did I hear anyone ask about my tomatoes? After harvesting some five hundred pounds over the summer, I finally lost interest and stopped picking around the end of September. When I yanked the last plant on November 12, it was still producing flowers and setting fruits.

And that's not all. On December 2, Steve and I, along with three friends, found at least eight species of native annual and perennial herbs in flower on the west slopes of Crater Mountain. These were coyote

mint (*Monardella linoides*), apricot globe-mallow (*Sphaeralcea ambigua*), wild tobacco (*Nicotiana attenuata*), stick-leaf (*Mentzelia albicaulis*), heavenly blue (*Eriastrum densifolium*), tansy-leaf phacelia (*Phacelia tanacetifolia*), wire lettuce (*Stephanomeria pauciflora*), and least snapdragon (*Antirrhinum kingi*). In addition, we noticed two exotic annuals, cheatgrass (*Bromus tectorum*) and wild mustard (*Brassica* sp.), also in bloom. Some of the natives were flowering amid patches of snow left by a storm five days earlier. That we found flowers in the snow is not surprising in itself; many Great Basin wildflowers can tolerate some degree of cold. Stick-leaf, for example, typically blooms in early spring when nighttime temperatures can drop to freezing. A little snowstorm is not apt to bother it much. Similarly, coyote mint blooms in summer at high elevations where July and August nights can be very cold.

What surprised me was that these plants were flowering in December. Surely this could not be typical. Back at home, I checked the web page for the Consortium of California Herbaria. As you may already know, one can search the web site for herbarium records of any plant species collected in California; a record typically includes collection location, collection date, and collector. I found that of 112 dated collections for coyote mint in Inyo County, most were made in June, July, and August. There were just four records from September and October, none later than October 20. In the case of apricot globe-mallow in Inyo County, six of 269 specimens were collected in autumn, five in October, one on November 7. The 27 Inyo County records of wild tobacco were concentrated in May, June, and July. There were, however, five September and three October collections. The latest was October 28.

Just as I suspected, the plants we found in flower on Crater Mountain were not simply late, they were extraordinarily late. At first I was excited—wildflowers three weeks before Christmas!—but the more I thought about it, the more my pleasure waned. It could be a fluke, of course, but I am pretty certain that these late bloomers are reminding us of what we already know: that the average temperature across the 48 contiguous states has risen 1.4 degrees Fahrenheit in the last century, that the decade from 2001 to 2010 was the warmest ever recorded, and that 2012 was the hottest year yet.

I'm not interested in promulgating doom and gloom; I'm interested in contentment and tomatoes. But it's

hard not to feel gloomy and doomy at the thought of losing the world we've loved all our lives—a world without pikas and polar bears, maybe even a world without winter. I'm thinking that I need to take a tip from my friends with chronic diseases. They know that they'll never get better, so they adjust to the new normal, and, when necessary, they adjust again, meanwhile doing everything they can to stay as healthy as possible. This year the new normal was wildflowers in December; next year, who knows? The luckiest plants and animals will adjust to the new normal because they have no choice. Maybe we can, too.

—Jan Bowers

Bristlecone Chapter Directory

President: Katie Quinlan 760-873-8023
Vice President: Michèle Slaton 760-938-3258
Secretary: Rosemary Jarrett 760-387-2782
Treasurer: Paul Satterthwaite 773-208-7858
Creosote Ring Sub-chapter: Kathy LaShure 760-377-4541
Chapter Council Rep: Steve McLaughlin 760-938-3140
Partnerships: Steve McLaughlin 760-938-3140
Conservation: Julie Anne Hopkins 831-566-6012
Programs: Michèle Slaton 760-938-3258
DeDecker Grants: Holly Alpert 760-709-2212
Field Trips: Sue Weis 760-873-3485
Historian: Kathy Duvall: 760-387-2122
Bishop Plant Sales: Katie Quinlan 760-873-8023
Mammoth Plant Sales: Sherry Taylor 760-934-2338
Publicity: Kristen Luetkemeier 703-862-4395
Newsletter: Edie Trimmer/Thomas Brill 760-920-3702
Membership: Edie Trimmer/Thomas Brill 760-920-3702
Website: Maggie Riley webmaster@bristleconecnps.org
Posters: Stephen Ingram 760-937-9918
Book Sales: Sue Weis 760-873-3485
T-shirt Sales: Scott Hetzler 760-873-8392
Highway Clean-up: Scott Hetzler 760-873-8392
DeDecker Garden: **OPEN**

Up-Coming Events

Northern California Botanists symposium

January 13-14, 2014 "Northern California Plant Life: Botany for a Changing World", California State University, Chico, plus a third day of workshops. Also included: a poster session, reception, banquet, keynote speaker. For details, see: www.norcalbotanists.org

January Board Meeting

Wednesday, January 15, 7 pm, Friends of the Inyo office on 819 North Barlow Lane, Bishop.
All members are welcome.

2014 Field Trip Planning

Wednesday, January 22, 6 pm, White Mountain Research Center, 3000 East Line St, Bishop.
Field trip leaders come to plan for the coming year! Contact Sue Weis at 760-873-3485 for information.

January Bristlecone Chapter Meeting and Program

Wednesday, January 22, 7 pm, White Mountain Research Station 3000 East Line St, Bishop
"Rare Plants, Weed Wars, and Outdoor School on the Tribe's Conservation Land"

Maturango Museum Wildflower Exhibit April 11-13, 2014, Maturango Museum, Ridgecrest CA

Rare Plant Treasure Hunt

Join Kathy LaShure and Creosote Ring members
Date between May 7-9. Contact Kathy LaShure at 760-377-4541 information.

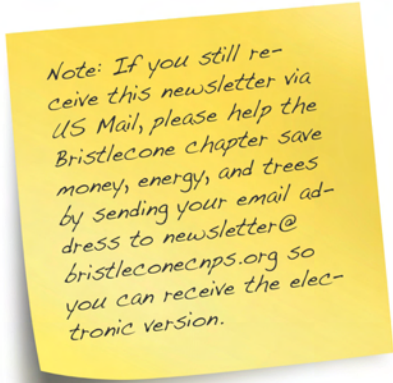
Next Newsletter Deadline

Please have your articles or information to us by February 15, 2014.

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The California Native Plant Society

Bristlecone Chapter
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Bishop, CA 93515-0364
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Membership

The California Native Plant Society is an organization of laypersons and professionals united by an interest in the plants of California. It is open to all. The society, working through its local chapters, seeks to increase the understanding of California's native flora and to preserve this rich resource for future generations.

To Join or Renew Online: Go to cnps.org and click on the JOIN/renew button at the top of the page, or mail in the form below:

Name: _____
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I wish to be affiliated with the Bristlecone Chapter: _____
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__ Patron \$300
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__ Mariposa Lily \$1500
__ Additional Contribution _____

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2707 K Street, Suite 1
Sacramento, CA 95816

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